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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/533,582 | 05/03/2005 | Yoshihiro Kanda | 071971-0224 | 2251 |

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| EXAMINER | |
|---|---|
| YOHA, CONNIE C | |
| ART UNIT | PAPER NUMBER |
| 2827 | |
| MAIL DATE | DELIVERY MODE |
| 03/04/2008 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/533,582 | KANDA ET AL. | |
| | Examiner | Art Unit | |
| | CONNIE C. YOHA | 2827 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *03 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *8,9,13,18,21,22,30-32 and 35-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) *8,9,18 and 41* is/are allowed.

6)☐ Claim(s) *13, 21-22, 30-32, 40, 42-44* is/are rejected.

7)☐ Claim(s) *34-39* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *5/3/05* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/3/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. This office acknowledges receipt of the following items from the Applicant:

Papers submitted under 35 U.S.C. 119(a)-(d) have been placed of record in the file.

Information Disclosure Statement (IDS) filed on 5/3/05 was considered.

2. Claims 1-7, 10-12, 14-17, 19-20, 23-29, and 33 are canceled

Claims 8, 13, 18, 21, 22, 30-32, and 34-38 are amended.

Claims 39-44 are newly cited.

Claims 8-9, 13, 18, 21-22, 30-32, 35-44 are pending.

### *Specification*

### Title

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed

### *Claim Rejections - 35 USC э 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 13, 21-22, 30-32, 40, 42-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Jin, Pat. No. 7068582.

With regard to claim 13 and 40, Jin discloses an information storage apparatus comprising: a cold cathode electron beam emitting part (fig. 2, 21) (col. 5, line 39-45); a flat anode (fig. 22) opposed to the cold cathode electron beam emitting part; a storage medium (fig. 2, 9) formed on the front or back of the anode and used for storing or reading information in accordance with irradiation with an electron beam emitted from the cold cathode electron beam emitting part (col. 2, line 24-51); and an accelerating part for accelerating the electron beam emitted from the cold cathode electron beam emitting part by using an electric field (col. 4, line 44-54), wherein the accelerating means part includes a plurality of electrodes to which voltages with different phases are respectively applied (col. 5, line 49-53), and the accelerating means part is configured to accelerate the electron beam by generating a moving electric field (col. 5, line 49-53).

With regard to claim 21, 31, 42, and 44 Jin discloses an information storage apparatus comprising: a cold cathode electron beam emitting part (fig. 2, 21) (col. 5, line 39-45); a flat anode (fig. 22) opposed to the cold cathode electron beam emitting part; a storage medium (fig. 2, 9) formed on the front or back of the anode and used for storing or reading information in accordance with irradiation with an electron beam emitted from the cold cathode electron beam emitting part (col. 2, line 24-51); a shielding part (fig. 6, 64) including a plate member, having a minute hole and configured to generate an

electric field for causing the electron beam emitted from the cold cathode electron beam emitting part to converge and pass through the minute hole (col. 6, line 29-43 discloses that the x-ray generating method film 64 (shielding means) must have minute hole in order for the x-ray beam 63 to pass through to reach the CD Rom media) (also with regard to claim 22 and 32); and an actuator part for moving at least one of the shielding part and the storage medium along the surface of the other, wherein a plurality of regions of the storage medium are allowed to be selectively irradiated with the electron beam (col. 6, line 8-67).

With regard to claim 30 and 43, Jin discloses an information storage apparatus comprising: a cold cathode electron beam emitting part (fig. 2, 21) (col. 5, line 39-45); a flat anode (fig. 22) opposed to the cold cathode electron beam emitting part; a storage medium (fig. 2, 9) formed on the front or back of the anode and used for storing or reading information in accordance with irradiation with an electron beam emitted from the cold cathode electron beam emitting part (col. 2, line 24-51); a plurality of convergence parts for causing each of the electron beams emitted from the cold cathode electron beam emitting parts to converge by using an electric field or a magnetic field (col. 4, line 44-47); and a plurality of deflection parts for deflecting each of the electron beams by using an electric field or a magnetic field (col. 5, line 38-39), wherein the deflection parts and the convergence parts are configured to cause deflection and convergence of the electron beams emitted from the cold cathode electron beam emitting parts in accordance with a common control signal so that a plurality of bits of information is stored and read out at the same time in/from a plurality

of regions of the storage medium (col. 5, line 7-col. 6, line 10).

***Allowable Subject Matter***

5. **Claims 8-9, 18 and 41 are allowed**.

Claims are considered allowable since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. The prior art does not teach the claimed invention of an information storage apparatus having in combination with other features, the cold cathode electron beam emitting part includes a cold cathode placed in a chamber surrounded by a partition and a film capable of transmitting an electron beam, wherein the inside of the chamber has a vacuum degree higher than a space sandwiched between the film capable of transmitting an electron beam and the anode.

The prior art does not teach the claimed invention of an information storage apparatus having in combination with other features, wherein the cold cathode electron beam emitting part includes a plurality of electron-beam emitting parts, and the electron-beam emitting parts emit respective electron beams at different timings in accordance with a distance from a given center so as to cause the emitted electron beams to converge.

6. **Claim 34-39 are objected** as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not show the limitation of the information storage apparatus of having in combination with other features, an irradiated-position-shift detecting part for detecting a shift between a given reference position and a position in the storage medium irradiated with each of the electron beams in accordance with the movement of said one of the shielding part and the storage medium by the actuator part, wherein the position irradiated with each of the electron beams is controlled by the actuator part in accordance with a result of the detection by the irradiated-position-shift detecting part.

The prior art of record does not show the limitation of the information storage apparatus of having in combination with other features, an irradiated-position detecting part for detecting a shift from a given reference position in accordance with a detection signal obtained when a irradiated-position detecting portion provided in part of the storage medium is irradiated with an electron beam emitted from at least one of the cold cathode electron beam emitting parts, wherein the position irradiated with the electron beam is controlled by the deflection parts and the convergence parts with respect to one or more electron beams emitted from the other cold cathode electron beam emitting parts in accordance with a result of the detection by the irradiated-position detecting part.

The prior art of record does not show the limitation of the information storage apparatus of having in combination with other features, wherein an electron beam emitted from a part of the cold cathode electron beam emitting means parts is used to store and read at least one of error detecting code and error correcting code in storing

or reading of information by using one or more electron beams emitted from the other cold cathode electron beam emitting means parts.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Naberhuis (6738336) and Hosoki et al (4786922) disclose a memory device having an electron beam recording means.

8. When responding to the office action, Applicants' are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

9. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571) 272-1799. The examiner can normally be reached on Mon. - Fri. from 8:00 A.M. to 5:30 PM. The examiner's supervisor, Amir Zarabian, can be reached at (571) 272-1852. The fax phone number for this Group is (571) 273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov Should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/C. C. Y./

Primary Examiner,

Art Unit 2827

/Connie C. Yoha/

Primary Examiner,

Art Unit 2827